

USAID | DELIVER PROJECT

Final Country Report

South Sudan





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USAID | DELIVER PROJECT, Task Order 4

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USAID | DELIVER PROJECT, Task Order 5

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USAID | DELIVER PROJECT, Task Order 7

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Abstract

From 2012-2016, the USAID | DELIVER PROJECT provided support to the Ministry of Health in the implementation of the Emergency Medicines Fund Program with the procurement and delivery of essential medicine kits, including antimalarial treatments, and long-lasting insecticide-treated bed nets for the people of South Sudan. The project also engaged in system strengthening efforts at the Central Medical Stores with the provision of staff trainings; IT and material handling equipment; and installation of racking.

Cover photo: Mathiang villagers take up the “last mile” delivery in Upper Nile state. Credit: Inter-Church Medical Assistance.

USAID | DELIVER PROJECT

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Project Overview and Context

Project Overview

The USAID | DELIVER PROJECT, in partnership with ministries of health and other organizations, improves health outcomes in developing countries by increasing the availability of health supplies. For more than 30 years, USAID has been a world leader in providing health commodities to field programs a critical component of health program success.

In 2011, following 40 years of regional conflict, South Sudan gained national independence. The new country was faced with building its health, agriculture, education, economic, and physical infrastructure.

South Sudan, one of the poorest countries in the world, had a per capita gross domestic product (GDP) of U.S.\$1,113 in 2014, ranking it 169 out of 204 countries (World Bank 2015). Accessing health services is difficult for many because of a severe shortage of health workers, nurses, and doctors in the health system (Global Health Policy Center 2012).

USAID and other development partners committed to providing assistance to South Sudan. One immediate priority was to ensure the availability of essential health commodities to prevent malaria,

tetanus, childhood, and other endemic diseases; especially among the most vulnerable populations: women and children.

On behalf of the South Sudan Ministry of Health (MOH), the USAID | DELIVER PROJECT (the project) and international donors and partners implemented the Emergency Medicines Fund (EMF) to ensure medicines and commodities were procured, stored, and delivered to county health departments and hospitals. The project provided capacity building support to staff at the MOH and the MOH Central Medical Stores in Juba.

The project also conducted a reproductive health quantification and reproductive health commodity security (RHCS) assessment. Based on the assessment, a draft RHCS strategy was developed.



Photo Credit: Missionpharma

Investment in Commodity Support and Technical Assistance

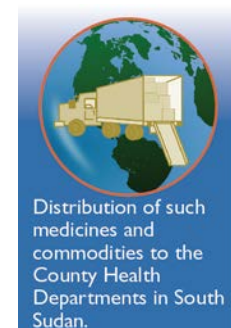
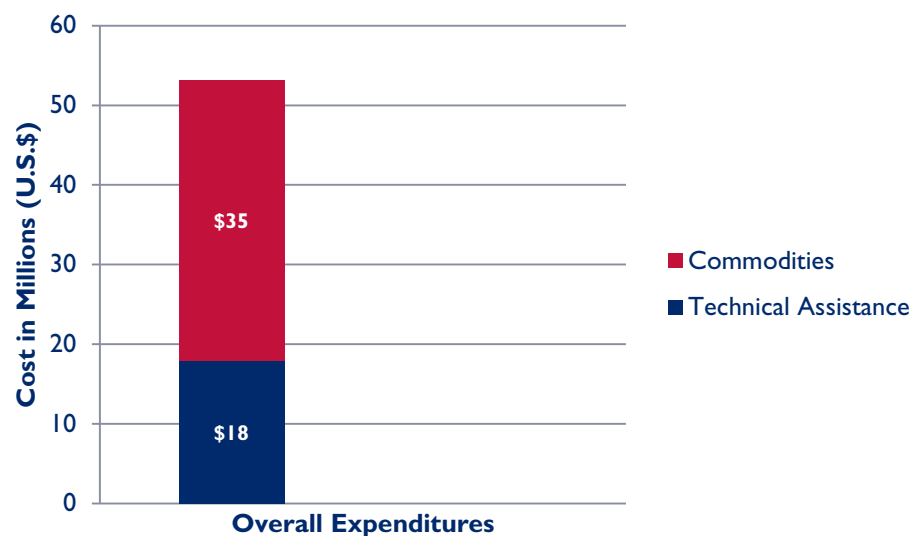
In South Sudan, the USAID | DELIVER PROJECT contributed to health commodity security through the EMF program, ensuring that county health departments had the essential medicines they needed. Shortly after independence, the end of a World Bank-managed, multi-donor trust fund activity left essential medicines in urgent demand. In July 2012, USAID, the U.K. Department for International Development (DFID), and the Norwegian Ministry of Foreign Affairs jointly developed the EMF to prevent stockouts at health facilities.

The EMF procured and distributed kits that included 102 products packaged in 90 unique kit combinations to treat malaria, administer vaccines, and ensure maternal health.

These kits were categorized and packed specifically for referral, state, and county hospitals, as well as Primary Health Care Centers (PHCC) and Primary Health Care Units (PHCU).

The EMF also provided supply chain systems strengthening activities for staff at the MOH and at the MOH Central Medical Stores (CMS) in Juba.

During the initiative, the total commodity support was approximately U.S.\$35.2 million, with an additional U.S.\$17.9 million spent on technical assistance to improve the CMS capacity and strengthen warehouse supply chain management skills.



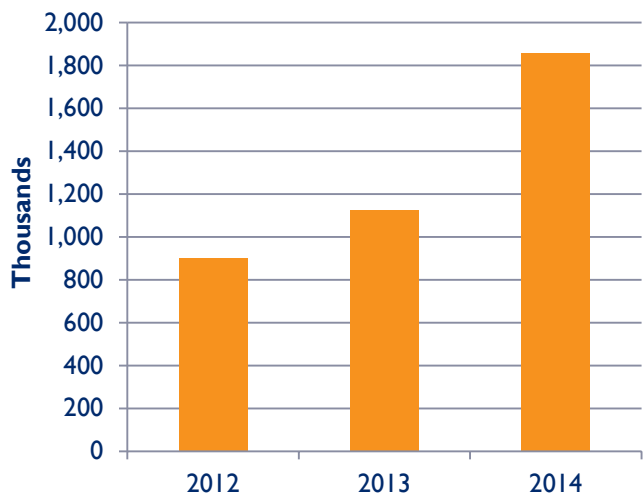
Malaria

Ensuring availability of long-lasting insecticide-treated bed nets and antimalarial drugs protects the most vulnerable populations.

Malaria is endemic in all regions of South Sudan, particularly during the April to October rainy season. The disease results in 54 deaths per 100,000 (WHO 2015b), accounts for 20–40 percent of all visits to health facilities, and 30 percent of all hospital admissions (HMIS 2012).

Long-lasting insecticide-treated bed nets (LLINs), antimalarial drugs, and ancillary supplies are not routinely available at county health departments, which makes protection, diagnosis, and treatment difficult.

Cases



Source: World Malaria Report (2012-2014), WHO



U.S.\$3.1 million spent to procure LLINs and antimalarials

750,000

LLINs procured (2012–2015)

3,750,000

Rapid diagnostic tests procured

7,428,600

Antimalarial treatments procured

Essential Medicines

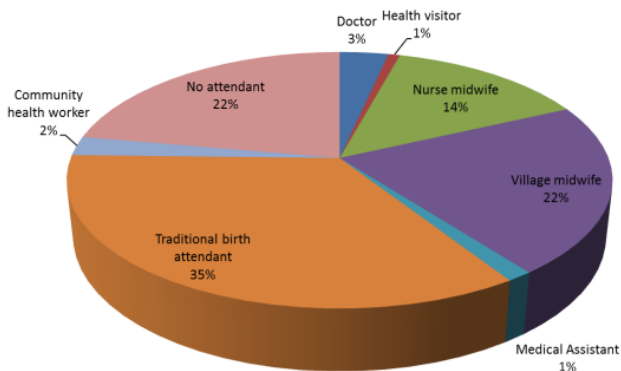
Access to essential medicines determines the basic quality of health for women and children in at-risk areas.

After decades of regional conflict, South Sudan's health system remains fragile—it lacks necessary supplies, infrastructure, and financial and human resources to ensure quality services for its citizens. The maternal mortality rate is 730 per 100,000 live births and the under-five mortality is 99 per 1,000 live births (WHO 2015).

The essential medicines needed to combat this risk are routinely unavailable at county health departments. The MOH, with international support through the EMF, continues to improve its ability to provide essential health services, especially childhood vaccines, malaria prevention and treatment, and prenatal care.

Procurement and delivery of health commodities is critical to making these services accessible.

Percentage of women ages 15–49 who gave birth in the two years preceding the survey by person assisting at delivery.



SHHS II 2010

Source: Government of the Republic of South Sudan. Ministry of Health. 2010

Ensuring Access to Essential Medicines in South Sudan



After 40 years of war, access to essential medicines remains a critical concern in South Sudan. Without much-needed supplies of essential medicines, malaria, tetanus, and childhood diseases are an even greater threat to already vulnerable populations.

Ongoing conflict and insufficient infrastructure pose severe challenges to **transporting critical medical supplies** to the women and children at highest risk.



Through the **Emergency Medicines Fund (EMF)** program, over 30 international partners have provided emergency medicines and medical supplies to **all 81 counties in all 10 states**, using trucks, planes, and helicopters.

102 products come packed in 90 different kit combinations to treat malaria, administer vaccines, and ensure maternal health. These kits enable life-saving services that have the potential to help prevent over 3,000 maternal deaths and over 40,000 deaths of children under age five.



Over 50,000 total kits

6 specialized kits for types of facilities:

- Referral hospitals
- State hospitals
- County hospitals
- Primary health care center-high
- Primary health care center-low
- Primary health care unit



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The EMF is jointly funded by USAID, the President's Malaria Initiative (PMI), the United Kingdom Department for International Development, and the Norwegian Ministry of Foreign Affairs and is implemented on behalf of the Ministry of Health by partners including John Snow, Inc., the World Food Programme (WFP), Systems for Improved Access to Pharmaceuticals and Services (SIAPS), Health Pooled Fund, Interchurch Medical Assistance, International Organization for Migration, state ministries of health, and county health departments.



Technical Assistance

Technical Assistance Overview

Delivering high-quality health care to patients and clients requires health facilities and dispensaries to have a full supply of medicines and other health products. This necessitates a well-functioning supply chain.

Using best practices and innovative approaches, the project develops and implements robust logistics solutions, fosters supportive commodity security environments, procures and ships health commodities, and partners with local organizations to build sustainable capacity.

In South Sudan, these interventions include—

Strengthen Logistics System Performance

- Procuring Essential Medicines and Health Commodities
- Providing Safe and Appropriate Storage Space
- Distributing Health Commodities

Increase National Commitment to Commodity Security

- Increasing Family Planning Commodity Security

Build Sustainable Capacity

- Building Capacity in Good Warehousing Practices and Supply Chain Management



Strengthen Logistics System Performance

To improve health outcomes in the countries where we work, the USAID | DELIVER PROJECT increases the availability of health products by strengthening supply chains and fostering global commitments. The project's supply chain integration framework guides these efforts.

In the public health setting, an integrated supply chain links everyone involved in managing essential health commodities into one cohesive supply chain management organization, ultimately helping clients access quality healthcare services and supplies.

Procuring Essential Medicines and Health Commodities

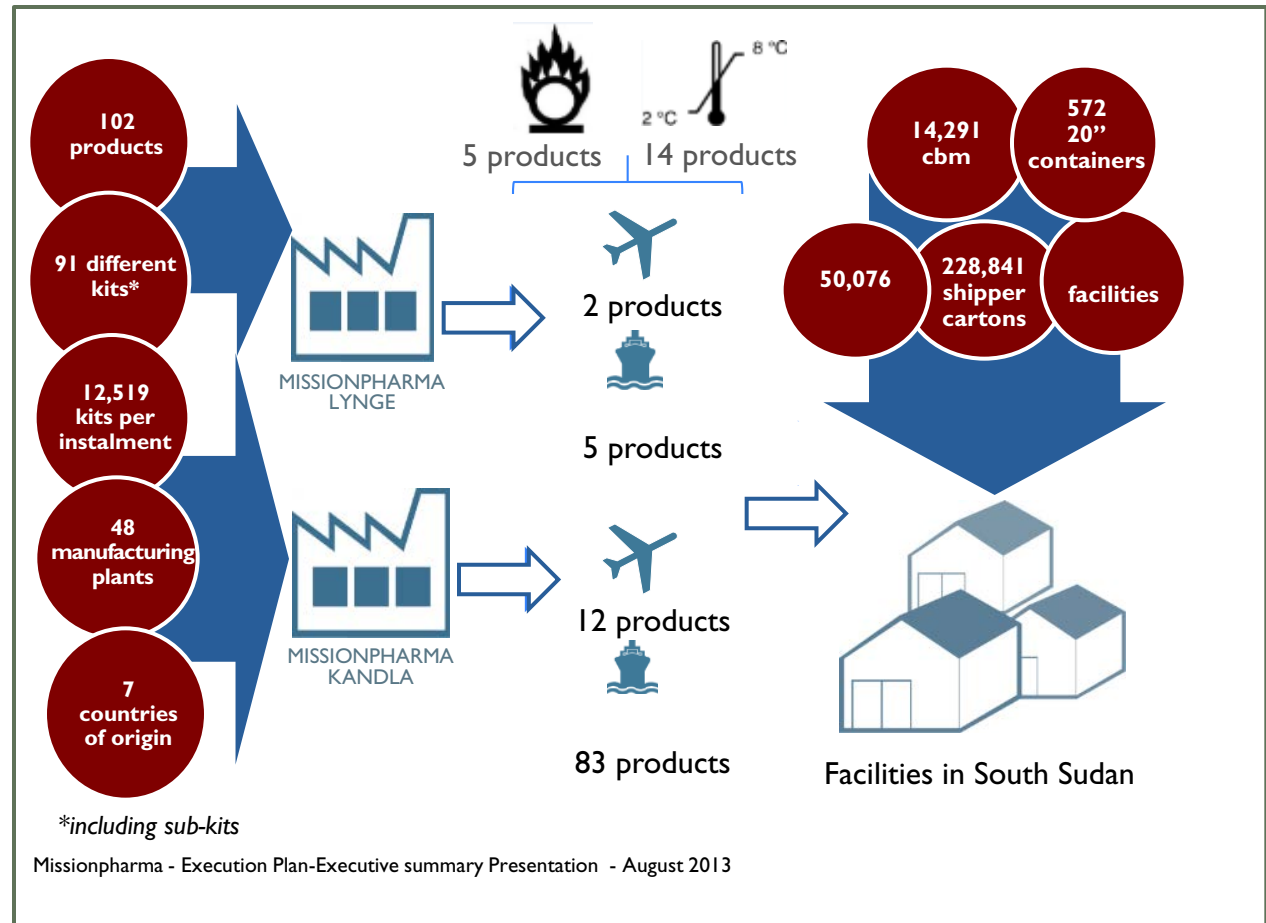
International donors provided the project with funds to procure much-needed essential medicines, malaria commodities, and LLINs for South Sudan.

Frequently, essential medicines are not available at health facilities in South Sudan. From June 2013 to March 2016, the project supported the MOH by using international donor funds to procure and deliver essential medical supplies.

The health commodities in the EMF kits were manufactured and assembled at several locations; they were kitted and delivered by ship or air to Juba. From there, commodities were delivered by road or air to all 81 counties, in all 10 states.

The project also procured commodities for malaria treatment, including rapid diagnostic test kits, artemisinin-based combination therapies (ACTs), and severe malaria treatments. In addition to the EMF kits, the project procured 750,000 LLINs for malaria prevention.

Figure 1. Missionpharma Kitting Process for Essential Medicines



Providing Safe and Appropriate Storage Space

Dejunking and refurbishing warehouses created additional storage space at a low cost—protecting supplies and improving commodity security.

Providing safe and adequate storage for medicines and commodities while in transit is critical to ensuring that they are available for the end user.

In South Sudan, a pharmaceutical logistics system is in the early stages, but storage conditions at the central, regional, county, and health facility-levels vary. Most health facilities cannot keep more than a three month supply of kits.

CMS capacity has improved, but it still cannot consistently meet the warehousing and distribution demands, requiring continued support and improvement.

In 2012, to ensure the safe transfer of procured commodities, the project conducted an assessment of the CMS warehouse.

The EMF supported select warehouse renovations at the CMS to improve storage conditions and handling capacity of the CMS.



Warehouse Improvements



- ✓ Dejunked Konyo Konyo and installed racking at both CMS warehouses.
- ✓ Refurbished Konyo Konyo warehouse, office, and toilet facilities.
- ✓ Installed air conditioning equipment at CMS warehouses.
- ✓ Updated electrical wiring and improved lighting at Konyo Konyo warehouses.
- ✓ Provided material handling equipment.
- ✓ Provided 1,718 pallets.
- ✓ Developed a stock card inventory management system and printed stock cards.
- ✓ Implemented pest control and cleaning activities at Konyo Konyo and Riverside warehouses.

Distributing Health Commodities

An innovative and flexible distribution strategy positively impacts health outcomes by improving the availability of health commodities.

Transportation infrastructure in South Sudan remains poor. A country roughly the size of Texas, South Sudan has only about 250km of paved roads. The northern conflict-affected states are particularly under-developed and during the rainy season, from April to October, the numerous unpaved roads become impassable.

A pharmaceutical assessment in 2011 found that 27 percent of health facilities, stores, and pharmacies in South Sudan had a stockout during the previous three months. From 2012 to December 2015, in close consultation with USAID, the MOH, and partners, the project developed distribution plans for delivering EMF kits and other commodities to the 81 county health departments.

The World Food Programme (WFP) transported EMF commodities to the three conflict-affected states—Jonglei, Unity, and Upper Nile. Logenix/Spedag and MEBS transported commodities to the remaining seven states.

At least 280,000 cartons—or 50,000 kits—were distributed to all 10 states; 350,000 LLINs were distributed to 16 county health departments in Central and Western Equatorial states in October 2014. In 2015, Systems for Improved Access to Pharmaceuticals and Services (SIAPS) distributed an additional 400,000 LLINs.



Implementing Partners

CARE International South Sudan
 CORDAID
 Christian Mission Aid
 Coordination of Organizations for Voluntary Service
 GOAL South Sudan
 Health Pooled Fund
 Integrated Service Delivery Program
 Inter-Church Medical Assistance
 International Committee of the Red Cross
 International Medical Corps
 International Rescue Committee
 John Snow, Inc.
 Kissito Healthcare International
 MSH/SIAPS
 Medair
 Médecins Sans Frontières
 Ministry of Health
 Missionpharma
 Nile Hope
 Relief International
 Save the Children
 Sign of Hope
 Sudan Medical Care
 Universal Intervention and Development Organization
 Health Forum
 NGO Forum
 Health Cluster
 Universal Network for Knowledge and Empowerment
 Agency
 World Relief

Distribution Partners

Logenix/Spedag
 MEBS
 Logistics Cluster/World Food Programme



Increase National Commitment to Commodity Security

Commodity security exists when every person can choose, obtain, and use quality contraceptives and other reproductive health products whenever they need them. Strong supply chains alone cannot ensure the availability of, and access to, these commodities.

To help countries create an enabling environment for reproductive health commodity security (RHCS), the USAID | DELIVER PROJECT conducted an assessment and forecasted national reproductive commodity requirements.

Increasing Family Planning Commodity Security

Through a series of assessments and strategic partnerships, South Sudan has improved commodity security for family planning commodities.

The success of essential medicine and malaria commodity security is dependent, in part, on national-level commitment. In South Sudan, the project worked with the MOH and international partners to improve the country's ability to manage the reproductive health commodity supply chain.

In October 2013, the project assisted the reproductive health division of the MOH in administering a reproductive health commodity security situational analysis, and conducting a maternal health and family planning commodity forecast and quantification for 2014–2016.





Build Sustainable Capacity

One of the most essential components of a robust health supply chain are the staff that implement the logistics tasks. To run effectively, public health supply chains require motivated, trained, and skilled staff with competencies in the various essential logistics functions; they must also be empowered to make decisions that positively impact health supplies and supply chains.

The goal of the project's capacity building activities is to strengthen human resources in public health supply chain systems in the developing world. By creating a superior workforce, organizations and individual staff can meet their customer service goals, ensure higher performance from the public health personnel, and; therefore, increase the availability of contraceptives and other essential health products.

Building Capacity in Good Warehousing Practices and Supply Chain Management

Logistics training at the CMS improved the competency needed to effectively run a health supply chain at the national level.

Reliable, flexible supply chains require skilled personnel. When the project started working in South Sudan in 2012, few staff at the MOH had training in supply chain management; basic equipment and standard operating procedures (SOPs) were not in place.

The project, through the EMF, provided capacity building opportunities for staff at the MOH and CMS, with the goal of improving warehousing practices by strengthening operations and storage capacity.

To promote standardized pharmaceutical storage and distribution across CMS warehouses, the project facilitated trainings for CMS staff on SOPs.

Twenty-one CMS and MOH pharmacists, storekeepers, and administrative staff were trained on the warehouse SOPs, which the project developed in conjunction with the MOH and SIAPS. Topics included, among others, good warehousing practices; first-to-expire, first-out; and picking and packing.

Fourteen CMS and MOH staff were trained in basic Microsoft Excel skills to improve their ability to manage the Excel-based commodity tracking system. The project also procured computer and printer equipment for the CMS office.

Several CMS staff received mentoring and experiential learning opportunities: a project-seconded warehouse advisor mentored the CMS manager and storekeepers. Additionally, one CMS and one project staff attended a supply chain management course in South Africa.

Another team comprised of one project staff, two CMS staff, and one state-level staff official visited the Medical Stores Department of the Tanzania Ministry of Health and Social Welfare to learn from their practices.

With training and equipment, the project improved the CMS capacity to manage the public health supply chain.

Trainings

- Standard operating procedures training in May 2015
- Excel training in June 2015





The Way Forward

The Way Forward

Financial Support

With limited government funding, the Government of South Sudan will continue to require donor support for its ongoing essential medicines and antimalarial commodity needs, for the foreseeable future.

Supply Chain Strategy

As health services expand and the environment remains unsettled, there will be an ongoing need for comprehensive supply chain solutions that are robust and flexible. Currently, a single solution does not exist because of the limited financial and human resources needed to develop and maintain a fixed system. There is a continuing need to provide both human resource and institutional capacity building to the MOH in pharmaceutical and supply chain management systems to facilitate a gradual shift from the current 'push' to a 'pull' system where consumption data is available from health facilities to make decisions.

Data Management and Visibility

Essential logistics data—such as consumption rates and patterns—remain extremely limited because they are inconsistently captured and reported. This makes it difficult to accurately forecast demand; make informed quantification and procurement decisions; and, thus, reduce stockouts and expiries.

Continued support and extensive training are necessary for building local capacity to manage data collection and analysis.

Human Resources

Health workers at all levels still lack the skills to capture, report, and use logistics data. A reporting system for tracer drugs has been implemented, but the forms have not been rolled out nationwide. Urgent needs for the country include further training on inventory control, use of LMIS forms, and ways to practice good logistics management.



Additional Resources

Acronyms

ACT	artemisinin-based combination therapy
CHD	county health department
CMS	Central Medical Store
DFID	Department for International Development (UK)
EMF	Emergency Medicines Fund
GDP	gross domestic product
HMIS	health management information system
JSI	John Snow, Inc.
LLIN	long-lasting insecticide-treated bed net
LMIS	logistics management information system
MOH	Ministry of Health
NMFA	Norwegian Ministry of Foreign Affairs
RHCS	reproductive health commodity security
PHCC	Primary Health Care Center
PHCU	Primary Health Care Unit
SIAPS	System for Improved Access to Pharmaceuticals and Services
SOP	standard operating procedure
USAID	United States Agency for International Development
WHO	World Health Organization
WFP	World Food Programme

Further Reading

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